

Were there symmetrical growth, and did the costæ radiate from a common centre, the form would come within the genus *Micrabacia* (Edwards and Haime, Hist. Nat. des Corall. vol. iii. p. 30, 1860). The genus is therefore a very interesting addition to the family Funginæ, and must be placed between the genera *Fungia* and *Micrabacia*.

It is mimetic of the genus *Diaseris* of the Lophoserinæ.

EXPLANATION OF PLATE XX.

- Fig. 1. *Diafungia granulata*.—Base of corallum, natural size.
 Fig. 2. The base, magnified.
 Fig. 3. Costæ, magnified, showing granules and synapticula.
 Fig. 4. Costæ, magnified (3 rows of granules).
 Fig. 5. Same, more magnified.
 Fig. 6. Costæ bifurcating into septa, magnified.
 Fig. 7. Septa and synapticula, magnified.
 Fig. 8. Margins of a septum, magnified.
 Fig. 9. Oblique view of interseptal spaces, and septa and synapticula.

Notes on a Collection of Birds made by Herr F. Bohndorff in the Bahr el Ghazal Province and the Nyam-nyam Country in Equatorial Africa. By R. BOWDLER SHARPE, F.L.S., F.Z.S., Senior Assistant, Department of Zoology, British Museum.

[Read 1st May, 1884.]

I OWE the opportunity of examining the interesting collection described in the present paper to the kindness of Mr. Bohndorff, who has just returned to Europe, after a hazardous passage down the Nile and across the desert of Korusko to Cairo. Mr. Bohndorff has been collecting in Africa for the last ten years, but has had the bad fortune to lose most of the results of his labours, his largest collection, the outcome of two years' toil, having been utterly destroyed when he fell into the hands of Zebehr's son, Suleiman, and the rebel troops at the time when General Gordon went out to Equatorial Africa as Governor-General of the Soudan for the first time. Stripped of everything he possessed and barely escaping with his life, which he owed to the intervention of an Egyptian officer, Achmed Effendi void el Chéter, who concealed him in the guise of a female slave in his house until the departure of the rebel soldiery, Mr. Bohndorff arrived at Chaka, where he met our gallant countryman General Gordon, who at that moment arrived to

destroy the town, which was in league with Suleiman and the rebels. The General generously provided the ruined traveller with clothes, camels, and money to enable him to return to Cairo. After an absence of many years from Europe, Mr. Bohndorff was anxious to return to his home in Mecklenburg; but on arriving at Cairo, he found that Dr. Junker, the well-known Russian traveller, was about to project an expedition into Central Africa, and, acting upon the solicitations of Dr. Schweinfurth and other friends, Mr. Bohndorff agreed to accompany Dr. Junker back to Equatorial Africa. The journey which he undertook, in company with the last-named explorer, is shown in the map of Central Africa by Dr. Joseph Chevanne.

While Dr. Junker was pushing his way still further to the westward in his explorations of the Welle River, Mr. Bohndorff stayed for two years at Dem Suleiman, the capital of the Gazelle River Province, with our countryman Lupton Bey, its governor, and made part of the collections here described. On receiving notice of the danger which threatened the route to Khartoum by the spread of the Mahdi's insurrection, he despatched a messenger to Dr. Junker, urging him to join him in his retreat down the Nile. Dr. Junker, however, preferred to remain along with his large collections. Thereupon Mr. Bohndorff, accompanied by his faithful negro servant "Yumma" (who is present with him this evening), ran the gauntlet of the rebels in a Nile steamer, and, after being twice attacked by the Arabs, arrived in safety at Khartoum. There he stayed a few days with our beleaguered countrymen, Colonel Coetlogon and Mr. Power, and occupied the room of the unfortunate General Hicks. He arrived in safety at Berber; and afterwards in the midst of the Korusko desert he perceived an approaching cavalcade, which proved to be General Gordon and Colonel Stewart with a small following, going post-haste to Khartoum. This was in last February, and the surprise was mutual; but one can well imagine the delight with which Mr. Bohndorff tells us he recognized his friend and preserver. Ten years before, when General Gordon was in Cairo, on his way to the interior as Governor of the Bhar el Ghazal Province, he met Mr. Bohndorff, then a young man anxious to explore Equatorial Africa, and took him with him. Mr. Bohndorff was with the General on several of his expeditions for the suppression of the slave trade, when Gondokoro was destroyed and Lado founded as a capital town; while for a short period he was installed

as Gordon's lieutenant at Sobat. A considerable amount of interest, therefore, attaches to the meeting of these old friends in the midst of the desert of Korusko.

On looking over the present collection, we are at once struck by the presence of so many species hitherto believed to be peculiar to West Africa; but it will be noticed that these species are from the Nyam-nyam district and from Semmio's country, while those from the Gazelle River are many of them well-known inhabitants of North-eastern Africa and Senegambia. It is evident that Mr. Bohndorff, when he crossed the watershed and descended into the Nyam-nyam country, passed the boundary line of two faunas, and that the animals of the Nyam-nyam country are those of the Gaboon and the Congo rather than those of the Lado district or of Kordofan. He informs me that the character of the countries are different; in Semmio and Ndoruma the forests clothe the sides of the rivers as in the countries of Western Africa, while in the Bahr el Ghazal the sides of the rivers are covered with grassy country, with occasional clumps of forest.

I have followed in the present paper the classification adopted by Dr. Hartlaub in his memoirs on Emin Bey's collections from Equatorial Africa, as it is in connexion with the recent explorations of the latter traveller that Mr. Bohndorff's collections possess the greatest amount of interest. I subjoin a list of the localities whence the specimens are recorded.

In the Nyam-nyam country, Sassa, Semmio, and Ndoruma are marked on the map above referred to. Mangbanga, an affluent of the Welle River, is not put down in any map at present.

Dembakir (26° W. long.) is on the slope of the watershed between the Gazelle-River Province and the Nyam-nyam country. Jur or Djur, Gattas, and Muschra-rec, the port of the Gazelle River, are marked in several maps.

Dem Suleiman, or Dem Zebehr, is the Moudirieh or capital of the provinces of Bahr el Ghazal and Nyam-nyam. It is the residence of Lupton Bey, and is called by the negroes "Juku."

In the following paper I have referred principally to the great work by Von Heuglin, the 'Ornithologie Nord-ost Afrikas,' and also to the two papers by Dr. Hartlaub:—

1. "Beitrag zur Ornithologie des Oestlich-Aequatorialen Gebiets Afrias. Nach Sendungen und Noten von Dr. Emin Bey in

Lado." Abhandl. Nat. Ver. Bremen, Bd. vii. Heft 2, pp. 83-128, Taf. v.

2. "Zweiter Beitrag," &c. *Op. cit.*, Bd. viii. Heft 1, pp. 183-232, Taf. v.

Ordo I. *OSCINES*.

Series II. *LAMINIPLANTARES*.

Cohors I. *CICHLOMORPHÆ*.

Phalanx 2. *Brevipennes*.

Fam. *CRATEROPODINÆ*.

1. *CRATEROPUS BOHNDORFFI*, sp. n.

Sassa, November. Iris brown.

Captain Shelley has given a revision of the species of *Crateropus* in the 'Ibis' for the present year (pp. 46-48), with a "Key to the species" improving on that given in my 'Catalogue' (vol. vii. pp. 469-470). In both our arrangements, however, the present bird finds itself in the yellow-billed section of the genus, in the neighbourhood of *C. atripennis* and *C. Haynesii*, which species it resembles in its maroon-coloured under surface. It may be placed in the "Key" as follows:—

d'. Abdomen maroon-brown.

g''. Head pearly grey.

i'''. Throat and fore neck pearly grey *atripennis*.

k'''. Throat and fore neck maroon like the rest of the
under surface *Hohndorffii*.

h''. Head black *Baynesii*.

The following is a description of the type:—

Adult. General colour above maroon from the nape to the tail-coverts, which are like the back; wing-coverts and primary-coverts dark ashy, edged with dull maroon; quills blackish, the primaries dull rufous towards the ends, the secondaries blackish, externally dull maroon; tail-feathers black, externally washed with dull maroon; crown of head and nape pearly grey, with lighter tips to the frontal feathers; lores, feathers below the eye, and a ring round the latter black; ear-coverts and hinder part of cheeks pearly grey; fore part of cheeks black; entire under surface of body dark maroon, the chin black; under wing-coverts like the breast; quills dusky below, slightly rufescent along the edge of the inner web. Total length 8·5 inches, culmen 0·85, wing 4·2, tail 3·1, tarsus 1·35.

Fam. MALACONOTINÆ.

2. LANIARIUS GAMBENSIS (*Licht.*).—*Dryoscopus gambensis*, *Heugl. Orn. N.O. Afr.* i. p. 456; *Hartl. Abhandl. Nat. Ver. Bremen*, vii. p. 93; *Gadow, Cat. B. Brit. Mus.* viii. p. 146.

Dem Suleiman, November. Iris red.

3. LANIARIUS ÆTHIOPICUS (*Gm.*).—*Dryoscopus æthiopicus*, *Heugl. t. c.* p. 458; *Gadow, Cat. B.* viii. p. 139.

Two adult birds from Semmio, January. Iris blackish brown.

4. LANIARIUS POLIOCEPHALUS (*Licht.*); *Gadow, Cat. B.* viii. p. 156.—*Meristes poliocephalus*, *Heugl. t. c.* p. 466; *Hartl. Abhandl. Bremen*, viii. p. 193.

A large series of adult specimens from Semmio, August. Iris orange-yellow.

They all bear out Von Heuglin's remark that the specimens from North-eastern Africa show no orange tint on the breast.

5. LANIARIUS ERYTHROGASTER (*Cretzschm.*); *Hartl. op. cit.* vii. p. 94; *Gadow, t. c.* p. 154.—*Dryoscopus erythrogaster*, *Heugl. t. c.* p. 463.

Two adult males from Jur Gattas, November. Iris clear yellow.

6. LANIARIUS CHLORIS (*Licht.*).—*Nicator chloris*, *Gadow, t. c.* p. 166.

An adult bird from Ndoruma, November. Iris greenish brown.

Exactly similar to the series in the British Museum from Fantee and Gaboon.

Phalanx 3. *Æquiparatæ.*

Fam. PACHYCEPHALINÆ.

7. BRADYORNIS DIABOLICUS, *Sharpe, Cat. B.* iii. p. 314.

An adult from Dem Suleiman, killed in November.

On reviewing the question of this species and *B. ater*, I cannot determine whether the former name should be suppressed or retained. I still think that there are two species; but the material for determining the point is insufficient, nor can I yet attach to the bird an older name than that given in my 'Catalogue' (*l. c.*), as long as it cannot be proved to be the *Sylvia pammelæna* of Stanley, which is in all probability *Melanornis edoloides*.

Fam. LANIINÆ.

8. LANIUS EXCUBITORIUS, *Des Murs*; *Heugl. t. c. p. 478*; *Hartl. op. cit. vii. p. 96*; *Gadow, t. c. p. 253*.

A fine adult female from Jur Gattas, November. Iris blackish brown.

9. CORVINELLA CORVINA, *Shaw*; *Gadow, t. c. p. 231*.—C. affinis, *Heugl. t. c. p. 488*; *Hartl. op. cit. vii. p. 96*.

An adult bird from Dem Suleiman, May.

Phalanx 4. *Brachypodes*.

Fam. PYCNONOTINÆ.

10. XENOCICHLA INDICATOR (*Verr.*); *Sharpe, Cat. B. vi. p. 103*.
One specimen from Mangbanga, April. Identical with West-African examples in the Museum.

11. ANDROPADUS VIRENS, *Cass.*; *Sharpe, Cat. B. vi. p. 109*.

Two specimens from Sassa, procured in October and November. Not to be distinguished from West-African skins.

Fam. ORIOLINÆ.

12. ORIOLUS AURATUS, *Vieill.*; *Heugl. t. c. p. 401*; *Sharpe, op. cit. iii. p. 195*; *Hartl. Abhandl. Bremen, viii. p. 195*.

Several specimens from Sassa, all of them identical with others from Senegambia in the British Museum.

13. ORIOLUS NIGRIPENNIS, *Verr.*; *Sharpe, Cat. B. iii. p. 220*.

A single specimen from Sassa, November. Identical with Gaboon birds in the Museum.

Fam. CAMPEPHAGINÆ.

14. GRAUCALUS PECTORALIS, *J. & S.*; *Sharpe, Cat. B. iv. p. 29*.
—*Ceblepyris pectoralis*, *Heugl. t. c. p. 418*.

A male from Dem Suleiman, May; and a female from Sassa, October. Mr. Bohndorff says that it is a common bird in Nyamnyam.

15. CAMPEPHAGA XANTHORNIDES (*Less.*); *Sharpe, Cat. B. iv. p. 60*.

A female bird from Ndoruma, November, appears to belong to the present species.

Family PRIONOPINÆ.

16. SIGMODUS MENTALIS, sp. n.

From Sassa, October. Having compared Mr. Bohndorff's specimens with *S. rufiventris* in the British Museum from Gaboon, I find that the former may always be distinguished by the smaller grey spot on the chin. It is strictly confined to the base of the latter, whereas in *S. rufiventris* the grey spot on the throat is much more extended, occupying the whole chin and part of the upper throat as well.

Adult. General colour above black with a greenish gloss; wing-coverts like the back; quills black, externally greenish black like the back; tail black with a greenish gloss, and ribbed with dusky cross-bars under certain lights; round the hind neck a black collar, uniting with the black throat; entire head and nape blue-grey, pearly grey or white on the lores and round the eye; cheeks, ear-coverts, and base of chin blue-grey; remainder of chin, throat, and sides of neck black; fore neck and chest white; remainder of under surface pale cinnamon-brown; sides of upper breast, axillaries, and under wing-coverts greenish black; quills below black, all but the first primary and the inner secondaries with a large white spot on the inner web. Total length 8·3 inches, culmen 0·85, wing 4·55, tail 3·2, tarsus 0·85.

Fam. DICRURINÆ.

17. BUCHANGA ASSIMILIS (*Bechst.*); *Sharpe, Cat. B.* iii. p. 248. —*Dicrurus divaricatus* (*Licht.*); *Heugl. t. c.* p. 422; *Hartl. op. cit.* vii. p. 97.

Several specimens from Kutschugali.

Phalanx 5. *Latirostres.*

Fam. PLATYSTIRINÆ.

18. PACHYPRORA ORIENTALIS (*Heugl.*).—*Platystira orientalis*, *Heugl. t. c.* p. 449.—*Batis orientalis*, *Sharpe, Cat. B.* iv. p. 136.

An adult male from Omschanga in Darfur, January.

Fam. MUSCIPETINÆ.

19. TERPSIPHONE CRISTATA (*Gm.*); *Sharpe, Cat. B.* iv. p. 355. —*Tchitrea melanogastra*, *Hartl. op. cit.* p. vii. p. 17, viii. p. 197. —*Terpsiphone melanogastra*, *Heugl. t. c.* p. 441.

A series of male birds from Semmio, March. One is a per-

fectly adult bird, agreeing with the fine specimen from Old Calabar with white under tail-coverts, mentioned by me in the 'Catalogue' (*l. c.*).

Fam. DENDRÆCINÆ.

20. *ZOSTEROPS SENEGALENSIS*, *Bp.*; *Heugl. t. c.* p. 414; *Hartl. op. cit.* vii. p. 99; *Sharpe, Cat. B.* ix. p. 181.

An adult male from Dem Suleiman, November.

Cohors II. CONIROSTRES.

Phalanx 1. *Decempennatæ*.

Fam. PLOCEINÆ.

21. *MALIMBUS NITENS* (*J. E. Gray*); *Elliot, Ibis*, 1876, p. 463.

An adult bird from Ndoruma, November. Iris dark red; bill ashy grey.

The range of this species, as given by Mr. Elliot, was from Sierra Leone to the Congo. DuChaillu found it in Gaboon. The present record is therefore of the greatest interest.

22. *HYPHANTORNIS ATROGULARIS*, *Heugl. Orn. N. O. Afr.* i. p. 559, pl. 19.

An adult male from Sassa, in September.

It is identical with Mr. Forbes's Lokoja specimen (*Shelley, Ibis*, 1883, p. 550).

Fam. VIDUINÆ.

23. *VIDUA PRINCIPALIS* (*L.*); *Heugl. t. c.* p. 585; *Hartl. op. cit.* vii. p. 102.

A male from Sassa, in September.

24. *PENTHETRIA MACRURA* (*Gm.*); *Heugl. Orn. N. O. Afr.* i. p. 579; *Hartl. op. cit.* viii. p. 202.

An adult male from Ndoruma, August.

Cohors III. COLIOMORPHÆ.

Phalanx 2. *Humilinares*.

Fam. STURNINÆ.

25. *LAMPROCOLIUS SPLENDIDUS* (*Vieill.*); *Hartl. Orn. Westafr.* p. 117.

A large series from Kutschugali and Semmio. Iris yellowish white.

Identical with Gaboon examples.

26. LAMPROCOLIUS AURATUS (*Gm.*); *Hartl. t. c.* p. 117.

A large series from Kutschugali and Semmio. Dr. Hartlaub considers the birds collected by Dr. Emin Bey at Fatico to be referable to *L. amethystinus* of Heuglin, distinguished from West-African *L. auratus* by the purplish-violet colour of the underparts, instead of the latter being steel-blue with a violet lustre. Mr. Bohndorff's specimens agreed with the Fantee birds.

27. ONYCOGNATHUS HARTLAUBI, *Gray, P. Z. S.* 1858, p. 291.

Several specimens of both sexes killed in Semmio in March. "Iris red."

Identical with specimens from Fantee. This occurrence of a typical West-African genus so far eastwards is interesting.

28. PHOLIDAUGES LEUCOGASTER (*Gm.*); *Heugl. t. c.* p. 521; *Hartl. op. cit.* viii. p. 227.

Apparently rare, as very few specimens were in the collection. A male was procured at Sassa in November, and a female in Semmio in May.

Phalanx 3. *Altinares.*

Fam. GARRULINÆ.

29. CRYPTORHINA AFRA (*L.*); *Sharpe, Cat. B.* iii. p. 75.—*Ptilostomus senegalensis*, *Heugl. t. c.* p. 491; *Hartl. op. cit.* vii. p. 107.

A large series of both sexes from Kutschugali and Semmio.

Phalanx 4. *Idiodactyles.*

Fam. IRRISORINÆ.

30. IRRISOR ERYTHORHYNCHUS (*Lath.*); *Heugl. Orn. N.O.-Afr.* i. p. 214; *Hartl. op. cit.* vii. p. 107.

A specimen from Kutschugali.

Cohors V. CINNYRIMORPHÆ.

Fam. NECTARINIINÆ.

31. NECTARINIA PLATYURA (*Vieill.*); *Heugl. Orn. N.O.-Afr.* i. p. 225; *Gadow, Cat. B. Brit. Mus.* ix. p. 10; *Hartl. op. cit.* vii. p. 109.—*Hedydipna platyura*, *Shelley, Monogr. Nect.* p. 7, pl. 3.

An adult male from Dem Suleiman, November. It agrees perfectly with Senegambian skins, and has a narrow violet line separating the green throat from the abdomen, not to the same

extent as in its ally, *N. metallica*, but still sufficiently distinct to make me wonder that neither Capt. Shelley nor Dr. Gadow has noticed it. The latter gentleman, although he quotes Von Heuglin's book, ignores the occurrence of the bird in North-eastern Africa, and states that it represents *N. metallica* in Senegambia, though Von Heuglin notes that he found it between the Kosanga and Djur rivers, and Antinori also met with it in the latter locality. Emin Bey has also sent a specimen from Lado.

32. CINNYRIS SUPERBUS (*Shaw*); *Shelley, Monogr. Nect.* pl. 60.

A male from Semmio, February. Iris blackish brown.

A splendid male bird, undistinguishable from Fantee examples. It has the under tail-coverts tipped with the same velvety maroon colour as the rest of the under surface, whereas many of the West-African specimens have these coverts entirely black. I found, however, on examination that others from the West Coast have the under tail-coverts tipped with maroon, and it is therefore probably only a sign of fuller plumage.

33. CINNYRIS SPLENDIDUS (*Shaw*); *Shelley, Monogr. Nect.* pl. 62.

Several specimens from Semmio, February. Iris blackish brown.

Identical with an adult male collected by the late Mr. W. A. Forbes at Lokoja on the Niger.

34. CINNYRIS CUPREUS (*Shaw*); *Shelley, t. c.* pl. 58.—*Nectarinia cuprea, Heugl. t. c.* p. 231; *Hartl. op. cit.* vii. p. 108.

Adult males from Semmio, February. Iris blackish brown.

This specimen is somewhat peculiar in wanting the coppery glossy plumage of the mantle and back; in this respect it resembles examples from Gaboon, which have the back of a metallic lilac colour.

35. CINNYRIS ANGOLENSIS (*Less.*); *Shelley, Monogr. Nect.* pl. 87.

Adult males from Semmio, February. Iris blackish brown.

Identical with Gaboon specimens of this Sun-bird, hitherto supposed to be confined to the West Coast of Africa, where it ranges from Cameroons to Angola.

36. CINNYRIS ACIK (*Antin.*); *Shelley, Monogr. Nect.* pl. 82.—

Nectarinia acik, *Antin.*; *Heugl. t. c.* p. 230; *Hartl. op. cit.* vii. p. 108.

Dem Suleiman and Dembachir.

The authority for Dr. Gadow's statement that *C. acik* "only appears to be different if compared with *C. cruentata* from the neighbouring countries, and that if compared with the western form it proves to be the same as *C. senegalensis*," appears to be his own *ipse dixit*; unless, indeed, he has united the two species from a desire to be different from Captain Shelley, as would appear to be frequently the case throughout his volume. Without seeing specimens it was somewhat rash to do this; and the series collected by Mr. Bohndorff amply proves that Captain Shelley was perfectly right in considering it a valid species.

37. ANTHOTHREPTES ORIENTALIS, *Hartl. Abhandl. Nat. Ver. Bremen*, vii. p. 109.

A pair of birds from Sassa, November. Iris dark brown.

The metallic green spot near the bend of the wing is much more pronounced than in the western specimens of *A. Longuemarii*, although a trace of it is evident in the last-named bird. The female, however, appears to differ from the same sex of *A. Longuemarii* in having the yellow of the abdomen extended to the lower breast.

Order II. VOLUCRES.

Cohors I. PSITTACI.

38. PALÆORNIS TORQUATA (*Bodd.*); *Heugl. t. c.* p. 738; *Hartl. op. cit.* viii. p. 212.

Several beautiful specimens from Jur Gattas.

39. PIONIAS CRASSUS, sp. n.

A single adult specimen from Ndoruma, November. Iris red.

The nearest ally of the present species appears to be *P. fusci-capillus*; but from this it is at once distinguished by the larger size and by the absence of yellow under the wing, the lower wing-coverts being grass-green, with emerald-green axillaries.

The following is a detailed description of the type specimen:—

Adult. General colour above grass-green, the feathers being brown, broadly edged and tipped with emerald-green on the back and scapulars, the wing-coverts being coloured like the back; bastard-wing and primary-coverts blackish, with dark bluish-green margins; quills dusky brown, with bluish-green edges to the

primaries; the secondaries grass-green externally, with emerald-green tips and margins; lower back, rump, and upper tail-coverts bright emerald-green; tail-feathers olive-brown, margined and tipped with emerald-green; crown of head and nape brown, washed with yellowish olive, with here and there a concealed spot of bright yellow; forehead dusky brown, blackish on the lores; ear-coverts and cheeks light ashy brown, washed with yellowish olive; throat dull yellowish olive with blackish shaft-lines, the fore neck and chest gradually dusky brown, with ashy edges to some of the feathers; remainder of under surface of body bright emerald-green, with yellow bases to the feathers; thighs emerald-green externally, dull ashy internally; axillaries emerald-green like the breast; under wing-coverts darker grass-green, the median series washed with emerald-green; greater series dull ashy, slightly washed with green; quills ashy below, lighter towards the inner web. Total length 9·5 inches, culmen (without cere) 1·05, wing 6·55, tail 3·3, tarsus 0·55.

40. *PIONIAS MEYERI* (Rüpp.); *Heugl. t. c.* p. 743; *Hartl. op. cit.* vii. p. 114.

A number of specimens from Kutschugali.

Cohors II. PICI.

41. *MESOPICUS SCHOENSIS* (Rüpp.).—*Picus schoanus*, *Heugl. op. cit.* ii. p. 809.—*Picus schoensis*, *Hartl. op. cit.* viii. p. 207.

A fine adult pair from Dem Suleiman, November.

It turns out that the bird supposed by Mr. Hargitt to be *M. schoensis* from Zanzibar, in Capt. Shelley's collection, is not really that species, but an intermediate form, for which I propose the name of *Mesopicus decipiens*. Like *M. schoensis* it has the black ear-stripe joined to the black cheeks; but the chest is barred as in *M. namaquus*. The true *M. schoensis*, as shown by Mr. Bohndorff's specimens, which agree with Rüppell's plate and Von Heuglin's descriptions, has the chest black, with small white spots. The female appears never to have been figured.

42. *MESOPICUS XANTHOLOPHUS*, *Hargitt, Ibis*, 1883, p. 421.

Two females and a male from Semmio, August. Iris dark red.

This species has hitherto been supposed to exist only on the Congo river and in Gaboon. Its range is thus widely extended to the eastward. I have submitted the specimens to Mr. Hargitt, who confirms the identification.

43. *MESOPICUS GOERTAN* (*Gm.*); *Hargitt, Ibis*, 1883, p. 412.
—*Picus goertan*, *Heugl. op. cit.* ii. p. 814; *Hartl. op. cit.* vii.
p. 109.

A large series from Semmio.

In some individuals the pale bars on the tail are very distinct and reach nearly across the feather. Some specimens, however, from the West Coast of Africa also show this character.

44. *CAMPOTHERA CAROLI* (*Malh.*); *Hargitt, Ibis*, 1883, p. 480.

A female bird from Sassa, identical with others from the Gold Coast in the British Museum. Mr. Hargitt also confirms this identification.

45. *CAMPOTHERA PERMISTA* (*Reich.*); *Hargitt, Ibis*, 1883, p. 478.

Ndoruma, November. Iris blackish brown.

It is interesting to find that the species from the Nyam-nyam country is the same as that of the Gaboon and Congo instead of being the Gold-Coast species *C. maculosa*.

46. *CAMPOTHERA BALIA* (*Heugl.*).—*Picus balius*, *Heugl. t. c.* p. 810.

A female from Semmio, January. Iris violet.

Mr. Hargitt, in his paper on the Woodpeckers of the Ethiopian Region, has united this species to *C. Cailiaudi* of Malherbe; and to judge from the description alone, which was all that Mr. Hargitt had to found his opinion upon, the two species would appear to be very similar. Heuglin's example was a male, and the specimen now sent by Mr. Bohndorff is a female; but I think there can be no doubt that it is identical with the species described by Heuglin. It seems to me that *C. balia* is a northern form of *C. Cailiaudi*, distinguished by its spotted mantle and upper back, and by the distinct black line along the upper edge of the ear-coverts, as well as by the moustache.

Cohors III. COCCYGES.

Fam. MEGALEMINÆ.

47. *POGONORHYNCHUS ROLLETI*, *De Fil.*; *Heugl. t. c.* p. 750;
Hartl. op. cit. vii. p. 112.

Adult male from Kutschugali, September. Iris blackish brown.

48. *POGONORHYNCHUS BIDENTATUS* (*Shaw*); *Heugl. t. c.* p. 753; *Hartl. op. cit.* vii. p. 112.

Several specimens from Semmio.

49. *POGONORHYNCHUS LEUCOCEPHALUS*, *De Fil.*; *Heugl. t. c.* p. 754; *Hartl. op. cit.* vii. p. 112.

Males from Jur Gattas and Kutschugali.

Identical with a specimen from the Sudan (*Knoblecker*) in the British Museum.

50. *GYMNOBUCCO BONAPARTII*, *Verr.*; *Marshall, Monogr. Capit.* pl. 55.

An adult bird from Sassa, October. Cannot be separated from Gaboon examples, with two of which I have compared it.

FAM. ZANCLOSTOMINÆ.

51. *CEUTHMOCHARES INTERMEDIUS*, sp. n.

Several specimens from Semmio belong to the intermediate race of Gaboon and Cameroons, which does not yet seem to have received a name. The throat is lighter and more pearly grey than in *C. flavirostris* of Fantee, without the ochraceous tinge of *C. australis*. It has a steel-blue rump and tail with greenish lustre, not violet as in *C. flavirostris* or oily green as in *C. australis*.

FAM. CUCULINÆ.

52. *CUCULUS SOLITARIUS*, *Steph.*; *Sharpe, P. Z. S.* 1873, p. 582.

An adult bird from Semmio, not to be distinguished from West-African specimens in the British Museum.

53. *CUCULUS GULARIS*, *Steph.*; *Sharpe, P. Z. S.* 1873, p. 585; *Hartl. op. cit.* vii. p. 113.

An adult bird from Sassa, September, exactly resembling others from South Africa.

54. *CUCULUS CLAMOSUS*, *Lath.*; *Sharpe, P. Z. S.* 1873, p. 587; *Hartl. op. cit.* viii. p. 210.

Two immature birds from Semmio, March. Iris dark brown.

Sent by Emin Bey from Loronio; also procured by Piaggia in M' tesa's country.

55. *COCCYSTES GLANDARIUS* (*L.*); *Heugl. t. c.* p. 786; *Sharpe, P. Z. S.* 1873, p. 595.—*Oxylophus glandarius*, *Hartl. op. cit.* viii. p. 210.

An adult bird from Jur Gattas and a young one from Semmio.

56. *COCCYSTES CAFER* (*Licht.*); *Sharpe, P. Z. S.* 1873, p. 596.
— *Oxylophus afer*, *Heugl. t. c.* p. 790; *Hartl. op. cit.* viii.
p. 210.

Old and young birds from Kutschugali and Semmio.

57. *CUCULUS KLAASI*, *Steph.*; *Sharpe, P. Z. S.* 1873, p. 592.—
Chalcites Clasii, *Hartl. op. cit.* viii. p. 209.—*Chrysococcyx Claasii*,
Heugl. t. c. p. 778.

Specimens of both sexes from Semmio.

Cohors IV. CÆNOMORPHÆ.

Fam. MUSOPHAGINÆ.

58. *TURACUS GIGANTEUS* (*Vieill.*); *Hartl. Orn. Westafr.* p. 159.

Mr. Bohndorff brought back an immense series of this bird
from Semmio, where he says it is very abundant.

59. *MUSOPHAGA ROSSÆ*, *Gould*; *Hartl. Orn. Westafr.*
p. 160.

Several fine specimens from Semmio, February. Iris dark
brown.

The occurrence of this splendid bird in the interior of Africa
is surprising, as it has hitherto been supposed to be confined to
Angola. I have compared Mr. Bohndorff's specimens with the
type in the British Museum.

60. *CORYTHAIX SCHUETTI*, *Cab. Orn. Centralbl.* 1879, p. 180.

♀. Semmio, March. Iris dark brown.

From the description published by Professor Cabanis, I have
no doubt that the birds procured by Mr. Bohndorff belong to
C. Schuetti of Angola. After the occurrence of *Musophaga Rossæ*
in the Nyam-nyam country, it is only natural to expect to find
the present species, which occurred alongside of it in the interior
of Angola explored by Dr. Schütt.

61. *CORYTHAIX LEUCOLOPHA*, *Heugl. t. c.* p. 703, Taf. 24.
Hartl. op. cit. viii. p. 210.

This species appears to be common in the Nyam-nyam country,
as Mr. Bohndorff obtained a large series in Semmio and Nd-
ruma.

62. *SCHIZORHIS ZONURA*, *Rüpp.*; *Heugl. t. c.* p. 705; *Hartl.*
op. cit. vii. p. 114.

Adult specimens from Kutschugali, September.

Fam. COLINÆ.

63. *COLIUS NIGRICOLLIS*, *V.*; *Hartl. Orn. Westafr.* p. 155.

A specimen from Ndoruma, October. "Iris white."

This bird agrees best with Congo specimens in the British Museum, but the crest is very much paler and of a whity brown colour.

Fam. CORACINÆ.

64. *EURYSTOMUS AFER* (*Lath.*); *Heugl. t. c.* p. 169; *Hartl. op. cit.* vii. p. 110.

A female from Kutschugali, shot in September.

Cohors V. AMPLIGULARES.

Fam. TROGONINÆ.

65. *HAPALODERMA NARINA* (*Vieill.*); *Heugl. t. c.* p. 176.

Several specimens from Semmio, of both sexes.

Fam. CAPRIMULGINÆ.

66. *CAPRIMULGUS EUROPEUS*, *L.*; *Heugl. Orn. N.O.-Afr.* i. p. 125; *Hartl. op. cit.* vii. p. 109.

Several specimens from Dongola.

67. *COSMETORNIS VEXILLARIUS* (*Gould.*)—*Macrodipteryx vexillarius*, *Heugl. Orn. N.O.-Afr.* i. p. 134.

An adult female from Semmio, March.

68. *SCOTORNIS LONGICAUDA* (*Drap.*); *Heugl. Orn. N.O.-Afr.* i. p. 133; *Hartl. op. cit.* viii. p. 207.

A specimen from Ndoruma, November.

This bird is very rufous in colour, but the markings appear characteristic.

Cohors VI. VOLUCRES SYNDACTYLÆ.

69. *MEROPS ÆGYPTIUS*, *L.*—*M. superciliosus* (*L.*); *Heugl. t. c.* p. 197.

A specimen from Semmio in changing plumage, killed in December.

70. *MEROPS NUBICUS*, *Gm.*; *Heugl. t. c.* p. 199; *Hartl. op. cit.* vii. p. 111.

Kaueh, February (three days beyond Khartoum).

71. *MEROPS ANGOLENSIS*, *Gm.*; *Sharpe, Cat. Afr. B.* p. 3.

An adult bird from Muschra Rec, which agrees with others from Gaboon. It is interesting to find this species and not *M. Lafresnayii*.

Fam. ALCEDININÆ.

72. *ALCEDO QUADRIBRACHYS*, *Bp.*; *Hartl. Orn. Westafr.* p. 34.

Several adult examples from Ndoruma and Semmio, March. Iris blackish brown.

Identical with Gaboon specimens in the Museum.

73. *HALCYON CHELICUTENSIS* (*Stanl.*); *Hartl. op. cit.* viii. p. 207.—*Dacelo tschelicutensis*, *Heugl. t. c.* p. 192.

A few specimens from Dem Bakir.

74. *HALCYON MALIMBICA* (*Shaw*); *Sharpe, Monogr. Alced.* pl. 72.

Adult birds from Semmio. The specimens agree with Mr. Forbes's Niger example and the Fantee skins in the British Museum, and not with the Gaboon birds.

75. *HALCYON CYANOLEUCA* (*Vieill.*); *Sharpe, Monogr. Alced.* pl. 69.

Adults and immature birds from Juku and Semmio.

76. *HALCYON SEMICÆRULEA* (*Forsk.*); *Hartl. op. cit.* vii. p. 110.—*Dacelo semicærulea*, *Heugl. t. c.* p. 190.

Adults and immature birds from Semmio.

77. *ISPIDINA PICTA* (*Bodd.*); *Hartl. op. cit.* viii. p. 207.—*Alcedo picta*, *Heugl. Orn. N.O.-Afr.* i. p. 183.

Adult and young birds from Semmio.

Fam. BUCEROTINÆ.

78. *TOCKUS ERYTHORHYNCHUS* (*Temm.*); *Elliot, t. c.* pl. lvi.—*Buceros erythrorhynchus*, *Heugl. t. c.* p. 727; *Hartl. op. cit.* vii. p. 112.

A female from Dembo, June.

79. *TOCKUS FASCIATUS* (*Shaw*); *Elliot, t. c.* pl. l. fig. 2.

From Semmio, February, and Ndoruma in September. The latter specimen is young, and is brown instead of black, while the penultimate tail-feather is black tipped with white as in *T. semifasciatus*. The third feather is white for its entire length. The white tip to the penultimate feather being one of the specific characters by which *T. semifasciatus* is

distinguished from *T. fasciatus*, it is an interesting piece of evidence of the close alliance of the two species, that *T. fasciatus* goes through a stage of plumage resembling the features of the adult *T. semifasciatus*.

80. *TOCKUS CAMURUS*, *Cass.*; *Elliot, t. c.* pl. lix.

A specimen from Sassa, October, agrees with others from Gaboon in the British Museum.

81. *PHOLIDOPHALUS SHARPII* (*Elliot*); *Elliot, t. c.* pl. xxxiii.

A specimen from Ndoruma. Identical with the type in the British Museum from Angola.

82. *SPHAGOLOBUS ATRATUS* (*Temm.*); *Elliot, t. c.* pl. xxiv.—
Buceros atratus, *Hartl. op. cit.* viii. p. 208.

A large series from Semmio, illustrating the changes of the species from youth to age. The young male evidently commences life with a rufous plumage like the female, as traces of it are to be seen in one of the male birds; but apparently the bill is like that of the old male in form, without such a large development of casque.

Cohors VII. PERISTEROIDEÆ.

83. *TRERON CALVA* (*Temm.*); *Shelley, Ibis*, 1883, p. 267.—
T. nudirostris, *Heugl. t. c.* p. 821; *Hartl. op. cit.* vii. p. 117.

A series from Sassa and Semmio.

84. *TRERON WAALIA* (*Gm.*); *Heugl. t. c.* p. 817; *Shelley, Ibis*, 1883, p. 265; *Hartl. op. cit.* vii. p. 117.

Several specimens from Jur Gattas and Dem Suleiman.

85. *COLUMBA GUINÆENSIS*, *Bonn.*; *Heugl. t. c.* p. 822; *Hartl. op. cit.* viii. p. 216; *Shelley, t. c.* p. 278.

A female from Jur Gattas, November. Iris ochre-yellow.

Order III. ACCIPITRES.

86. *GYPHOIERAX ANGOLENSIS* (*Gm.*); *Heugl. t. c.* p. 106, note;
Sharpe, Cat. B. i. p. 312.

A considerable series of old and young birds was brought by Mr. Bohndorff, who says that it was plentiful in the Nyamnyam country wherever the Elæis palm is found. It is very fond of the fruit of this palm and devours it, as well as feeding on small antelopes &c. The late Baron von Heuglin believed he

saw this species on the Kosanga river; and there can be little doubt of the correctness of his surmise.

87. *POLYBOROIDES TYPICUS*, *Smith*; *Sharpe, Cat. B. i. p. 48.*—*P. radiatus*, *Heugl. t. c. p. 76.*

A fine adult male from Semmio, March.

88. *BUTASTUR RUFIPENNIS* (*Sund.*); *Sharpe, Cat. B. i. p. 299.*—*Poliornis rufipennis*, *Heugl. t. c. p. 95*; *Hartl. op. cit. viii. p. 213.*

An adult female from Kutschugali, procured in October.

89. *ASTURINULA MONOGRAMMICA* (*Temm.*); *Sharpe, Cat. B. i. p. 275*; *Hartl. op. cit. vii. p. 115.*—*Astur monogrammicus*, *Heugl. t. c. p. 64.*

Adult birds from Kutschugali and Semmio.

90. *MELIERAX POLYZONUS* (*Rüpp.*); *Sharpe, Cat. B. i. p. 88.*—*Astur mechowi*, *Cab.*; *Hartl. op. cit. viii. p. 213.*—*Astur polyzonus*, *Heugl. t. c. p. 61.*

Two adult birds from Kutschugali, August.

The differences on which Prof. Cabanis has founded his *Melierax mechowi* seem to me to be purely individual, as in the series of twelve birds, all adults, in the British Museum, every gradation between a uniform and a closely barred wing can be found, and I believe that the uniformly marked birds are simply the more adult.

91. *ASTUR SPHENURUS* (*Rüpp.*); *Sharpe, Cat. B. i. p. 112.*—*Nisus sphenurus*, *Hartl. op. cit. viii. p. 214.*—*N. badius*, *Heugl. t. c. p. 70.*

An adult male from Sassa, and one from Semmio with remains of immature plumage. The species was also in the collection from Juku.

92. *HELOTARSUS ECAUDATUS* (*Daud.*); *Heugl. t. c. p. 80*; *Sharpe, t. c. p. 300.*

A fine adult female from Mangiri, October. This was the only specimen obtained by Mr. Bohndorff, though he says they are common. They are, however, very shy; and the present specimen was only got by finding the nest, and shooting the old bird as she flew off.

93. *PERNIS APIVORUS* (*L.*); *Heugl. t. c. p. 97*; *Sharpe, Cat. B. i. p. 344.*

An adult bird from Sassa, November; and a younger bird from Semmio.

94. *BAZA CUCULOIDES* (*Swains.*); *Sharpe, Cat. B. i. p. 354*, pl. xi. fig. 2.—*Aviceda cuculoides*, *Heugl. t. c. p. 106*, note.

A pair of birds from Semmio, February. They are identical with Gaboon specimens. Baron von Heuglin identified a bird seen, but not procured, by him in the country of the Dor Negros as being probably of the present species, and he was no doubt correct in the identification.

95. *CERCHNEIS ARDESIACA* (*Bon. & Vieill.*); *Sharpe, Cat. B. i. p. 446*.—*Falco ardesiacus*, *Heugl. t. c. p. 34*; *Hartl. op. cit. vii. p. 115*.

Two adult birds from Ndoruma, September. Identical with Senegambian and Bogos specimens.

96. *CERCHNEIS TINNUNCULUS* (*L.*); *Sharpe, Cat. B. i. p. 425*.—*F. tinnunculus*, *Heugl. t. c. p. 40*.

A young male from Jur Gattas, shot in November, of the ordinary European type, and not belonging to the dark resident race of the Abyssinian highlands.

97. *FALCO RUFICOLLIS*, *Sw.*; *Sharpe, Cat. B. i. p. 404*; *Hartl. op. cit. vii. p. 115*.—*F. chicquera*, *Heugl. t. c. p. 36*.

Two immature birds from Semmio, April.

Mr. Gurney very aptly refers to my omission of the young plumages in my description of the species (*l. c.*). I had not at that time any immature birds in the Museum collection; but he has supplied some very good notes on the subject in the 'Ibis' for 1882 (p. 162).

A young bird of this species may be recognized at a glance by its much darker colour, dusky mantle, broader black bars, dusky rufous head, with broad black centres to the feathers, and by the rufous margins to the feathers of the upper parts. The change to the uniform rufous head and blue-grey upper surface is by a direct moult, the new feathers on the back being light blue-grey with narrow black cross bars. On the under surface of the body the rufous colouring of the breast is more of a sienna-colour and the throat is also rufescent, while the flanks are also nearly uniform; the cross bars on the flanks and sides of the breast are also broader and coarser.

98. *BUBO CINERASCENS*, *Guér.*; *Sharpe, Cat. B. ii. p. 32*; *Hartl. op. cit. viii. p. 215*.

An adult bird from Ndoruma, killed in July. It seems to be identical with specimens from Bogos Land in the Museum, and not with true *B. maculosus* of South Africa.

99. *SCOPS GIU* (*Scop.*); *Sharpe, Cat. B.* ii. p. 47.—*S. zorca*, *Heugl. t. c.* p. 117.

An adult male from Dembo (a zereeba on the Bahr el Ghazal), July. This specimen is undoubtedly identical with European and Senegambian examples.

100. *GLAUCIDIUM PERLATUM* (*Vieill.*); *Sharpe, Cat. B.* ii. p. 209.—*Athene perlata*, *Hartl. op. cit.* vii. p. 215.—*Noctua perlata*, *Heugl. t. c.* p. 120.

Several individuals from Sassa and Semmio.

An Abyssinian specimen in the British Museum has seven bars on the tail, and the example retained by the latter institution from Semmio has six white bars.

101. *SYRNIUM BOHNDORFFI*, sp. n.

From Semmio and Ndoruma.

Closely allied to *S. nuchale*, Sharpe, but distinguished at once by its deep cinnamon colour above, with scarcely any white spots, and by the absence of the large white spots on the wing-coverts, which are thus almost entirely uniform. The breast, instead of being broadly barred across, has only some small white spots and bars. The specimens brought by Mr. Bohndorff have been compared with five adult specimens of *S. nuchale* from the Gold Coast and Gaboon.

I subjoin a description of the typical example:—

Adult. General colour above dark cinnamon-rufous, with scarcely an indication of any vermiculations, excepting a few on the lower back and upper tail-coverts, the latter having indications of fulvescent spots along the shafts; scapulars lighter rufous externally, inclining to tawny buff towards the base, and with a large quadrate spot of white near the end of the outer web; wing-coverts nearly uniform rufous brown, the outer webs of the greater series lighter rufous and with a slight indication of dusky vermiculations and a whitish spot towards the end of the outer web; bastard wing blackish, with rufous bars on the outer web; primary-coverts uniform black, excepting a rufous bar at the end; quills regularly barred with blackish and light rufous brown, the inner secondaries pale cinnamon, with light brown cross bars; tail-feathers barred with blackish and light rufous, the centre ones with five pale bars including the tip, the light bars being seven in number on the outer feathers; crown of head uniform cinnamon-brown, with black shaft-streaks and a few

tiny spots of buffy white; the hind neck lighter cinnamon and with a few more distinct diamond-shaped spots of white; loreal plumes white, extending above the eye, the latter having a black line round it; ear-coverts rufescent, with dusky blackish cross lines; cheeks dull white, with dusky cross bars; remainder of under surface of body light cinnamon-rufous, with a few white spots and bars on the breast, the abdomen and flanks being broadly barred with white, each white bar being bordered above and below with a line of blackish; thighs and vent yellowish buff; the under tail-coverts white, slightly barred with rufous near their ends; under wing-coverts and axillaries light cinnamon-buff, with a few dusky bars near the edge of the wing; the lower series yellowish buff, with broad black ends, resembling the under surface of the wing, which is blackish, barred and tipped with dull rufous. Total length 13 inches, wing 10·1, tail 5·5, tarsus 1·6.

102. *STRIX FLAMMEA*, L.; *Heugl. t. c.* p. 123; *Sharpe, Cat. B.* ii. p. 291.

A female from Semmio, February.

Of the usual dark African type, with numerous spots.

Order V. GRALLATORES.

Series I. GRALLATORES ALTINARES.

Cohors I. HERODII.

Fam. ARDEINÆ.

103. *BOTAURUS STURMI* (*Wagl.*); *Heugl. t. c.* p. 1078; *Hartl. op. cit.* viii. p. 215.—*Ardea Sturmi*, *Heugl. t. c.* p. 1078.

An adult bird from Semmio, killed in March.

104. *BUTORIDES ATRICAPILLA* (*Afzel.*).—*Ardea atricapilla*, *Heugl. t. c.* p. 1080.

An adult specimen in full plumage from Semmio, May.

Cohors II. PELARGI.

Fam. CICONIINÆ.

105. *ANASTOMUS LAMELLIGERUS*, *Temm.*; *Heugl. t. c.* p. 1119.

A single specimen from Dem Bakir, May; in very worn plumage.

Cohors IV. CURSORES.

Fam. CHARADRIINÆ.

106. HOPLOPTERUS SPINOSUS (L.); *Heugl. Orn. N.O.-Afr.* ii. p. 1004.

A fine specimen from the Gazelle River.

Identified by Mr. Harting.

107. LOBIVANELLUS SENEGALUS (L.).—*L. senegalensis*, *Heugl. Orn. N. O.-Afr.* ii. p. 1000.

A female from Kutschugali, September.

Fam. RALLINÆ.

108. PARRA AFRICANA, *Gm.*; *Heugl. t. c.* p. 1216; *Hartl. op. cit.* vii. p. 119.

Several specimens from Muschra Rec.

109. PORPHYRIO ALLENI, *Thomps.*; *Heugl. t. c.* p. 1228; *Hartl. op. cit.* viii. p. 219.

An adult specimen from Muschra Rec.

110. CORETHRURA CINNAMOMEA (*Less.*); *Hartl. Orn. West-afr.* p. 242.

Ndorama, November. Iris clear brown.

Identical with West-African specimens in the British Museum.

111. LIMNOCORAX NIGER (*Sw.*).—*Ortygometra nigra*, *Heugl. t. c.* p. 1237; *Hartl. op. cit.* vii. p. 119.

An adult specimen from Muschra Rec, March.

Order VII. NATATORES.

Cohors V. TOTIPALMATÆ.

Fam. ANATINÆ.

112. DENDROCYGNA VIDUATA (L.); *Heugl. Orn. N.O.-Afr.* ii. p. 1298.

A female procured at Kutschugali in September.
